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WHAT IS CLAIMED IS:

1. An in vitro method of recognizing and diagnosing acute coronary syndroms, especially an acute myocardial infarction, **characterized** by determining the content of choline, choline and/or trimethyl ammonium derivatives selected from the group comprising phosphoryl choline, plasmalogens, and lysoplasmenyl choline in body fluids or component parts of the body.

Correlating the amt. of choline to acute coronary syndrome

2. The in vitro method as claimed in claim 1, **characterized** in that the content of choline, choline and/or trimethyl ammonium derivatives selected from the group comprising phosphoryl choline, plasmalogens, and lysoplasmenyl choline is evaluated taking into account a limit value.

3. An in vitro method of recognizing and diagnosing acute coronary syndroms, especially an acute myocardial infarction, **characterized** by determining the content of reaction products of choline, choline and/or trimethyl ammonium derivatives selected from the group comprising phosphoryl choline, plasmalogens, and lysoplasmenyl choline in body fluids or component parts of the body, the reaction products being selected from the group comprising 1-O-alk-1'-enyl-2 substituted glycerol and 1-O-alk-1'-enyl-2 substituted glycerol phosphate.

4. An in vitro method of recognizing and diagnosing acute coronary syndroms, especially an acute myocardial infarction, **characterized** by watching a condition or process in body fluids or component parts of the body which condition or process is determined by the content of choline, choline and/or trimethyl ammonium derivatives selected from the group comprising phosphoryl choline, plasmalogens, and lysoplasmenyl choline, and/or the reaction products thereof selected from the group comprising 1-O-alk-1'-enyl-2 substituted glycerol and 1-O-alk-1'-enyl-2 substituted glycerol phosphate.

5. An in vitro method of recognizing and diagnosing acute coronary syndroms, especially an acute myocardial infarction, **characterized** in that quantitative, semiquantitative, or qualitative observations are made which are determined by the content of choline, choline and/or trimethyl ammonium derivatives selected from the group comprising phosphoryl choline, plasmalogens, and lysoplasmenyl choline, and/or the reaction products thereof selected from the group comprising 1-

O-alk-1'-enyl-2 substituted glycerol and 1-O-alk-1'-enyl-2 substituted glycerol phosphate in body fluids or component parts of the body.

6. The in vitro method as claimed in any one of the preceding claims, **characterized** in that nuclear magnetic resonance (NMR) methods, biochemical, enzymatic, immunological, clinical-chemical, chromatographic, mass spectrometric, electrochemical, photometric methods are applied to determine choline, choline and/or trimethyl ammonium derivatives selected from the group comprising phosphoryl choline, plasmalogens, and lysoplasmenyl choline, and/or the reaction products thereof selected from the group comprising 1-O-alk-1'-enyl-2 substituted glycerol and 1-O-alk-1'-enyl-2 substituted glycerol phosphate.

7. An in vitro method of recognizing and diagnosing acute coronary syndroms, especially an acute myocardial infarction, **characterized** in that body fluids or component parts of the body are subjected to NMR spectroscopy and the evaluation is accomplished by pattern recognition of a plurality of substances, especially of choline, choline and/or trimethyl ammonium derivatives selected from the group comprising phosphoryl choline, plasmalogens, and lysoplasmenyl choline, of the reaction products thereof selected from the group comprising 1-O-alk-1'-enyl-2 substituted glycerol and 1-O-alk-1'-enyl-2 substituted glycerol phosphate, and of creatine and dimethyl amine.

8. The in vitro method as claimed in any one of the preceding claims, **characterized** by determining choline, choline and/or trimethyl ammonium derivatives selected from the group comprising phosphoryl choline, plasmalogens, and lysoplasmenyl choline, and/or the reaction products thereof selected from the group comprising 1-O-alk-1'-enyl-2 substituted glycerol and 1-O-alk-1'-enyl-2 substituted glycerol phosphate in a body fluid selected from a group comprising serum, plasma, whole blood, prepared blood samples, and urine.

9. Means for use in the diagnosis and/or analysis of acute coronary syndroms, especially an acute myocardial infarction, suitable for a method as claimed in any one of claims 1 to 8.

10. A test kit for diagnosis and/or analysis of acute coronary syndroms, especially an acute myocardial infarction,

characterized by comprising means for receiving a body fluid or a component part of a body and means for detecting choline, choline and/or trimethyl ammonium derivatives selected from the group comprising phosphoryl choline, plasmalogens, and lysoplasmenyl choline, and/or the reaction products thereof selected from the group comprising 1-O-alk-1'-enyl-2 substituted glycerol and 1-O-alk-1'-enyl-2 substituted glycerol phosphate in the body fluid or component part of the body.

11. The test kit as claimed in claim 10, **characterized** in that the means for detecting give an indication when a limit value for the content of choline, choline and/or trimethyl ammonium derivatives selected from the group comprising phosphoryl choline, plasmalogens, and lysoplasmenyl choline, and/or the reaction products thereof selected from the group comprising 1-O-alk-1'-enyl-2 substituted glycerol and 1-O-alk-1'-enyl-2 substituted glycerol phosphate in the body fluid or component part of the body is exceeded.